



# **ASD(HA) Policies for Operation Iraqi Freedom Depleted Uranium (DU) Medical Management**

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# ASD(HA) Policies for Depleted Uranium (DU) Medical Management



- ♠ 30 May 2003, OSD(HA) 03-012, Policy for OIF Depleted Uranium (DU) Medical Management
- ♠ 6 Feb 2004, OSD(HA) 04-004, DoD Deployment Biomonitoring Policy and Approved Bioassays for Depleted Uranium and Lead
- ♠ 9 Apr 2004, OSD(HA) Memorandum, OIF Depleted Uranium Medical Management
- ♠ <http://www.ha.osd.mil/policies/default.cfm>

# ASD(HA) DU Policies

## Why Were the Policies Issued?



- ♠ DoD's commitment to ensuring the health concerns of our redeploying personnel are addressed
- ♠ Document DU exposure
- ♠ Identify appropriate DU-exposed service members for referral to VA DU Follow-up Program
- ♠ Long-term implications of DU exposure largely unknown
- ♠ Historical precedent (Operation Desert Shield/Desert Storm; OIF (UK))

# **ASD(HA) DU Policies**

## **What Is Required?**



- ♠ Identification of all OIF service members, DoD civilians, and volunteers accompanying US Forces with potential DU exposure
  - Review of operational events (Friendly fire)
  - Post-Deployment Health Assessment (DD Form 2796)
- ♠ Qualitative assessment of level of exposure for service members and government civilians (refer others)
- ♠ DU bioassays for those with potential for significant exposure

# **ASD(HA) DU Policies**

## **What Is Required? (cont.)**



- ♠ Offer referral to Baltimore VA Medical Center DU Follow-up Program for those with embedded DU fragments and others with documented significant exposures
- ♠ Personnel notified of their results
- ♠ Use of health risk communication practices throughout the process

# Identification and Assessment of Possible DU Exposure



- ♠ Level I: Personnel struck by DU munitions/fragments or who were in, on, or within 50 meters when an armored vehicle was struck
- ♠ Level II: Personnel who routinely enter DU-damaged vehicles or fight fires involving DU munitions as part of their military occupational specialty
- ♠ Level III: Personnel with “incidental” (insignificant DU exposures) -- infrequent exposure not expected to result in significant uptake of DU

# Urine DU Bioassays



- ♠ Required for Levels I and II exposures; optional for Level III
  - 24-hour urine samples taken within 180 days (ideally) of exposure sent to approved lab IAW with Service guidance
  - Bioassays consist of testing urine, normalized for urine creatinine values, for total uranium, and for the presence of DU (isotopic analysis)
  - Submission of Depleted Uranium Questionnaire, and Health Survey (DD Forms 2872 and 2872-1 Test) with urine samples

# Referral to VA



- ♠ Offer referral to the Baltimore VA's DU Follow-up Program for those with embedded fragments and others with elevated levels of DU
- ♠ Biennial comprehensive physical examinations and repeat DU bioassays (2 1/2 days)



# Additional Requirements



- ♠ DoD Deployment Health Clinical Center (Walter Reed Medical Center)
  - Archival center for bioassay results and responsible for coordinating referrals and any long-term case management
- ♠ Service semi-annual reporting of DU Bioassay results to the Deployment Health Support Directorate (per 9 Apr 2004 memorandum to the Services)



# **Implementation of the ASD(HA) Depleted Uranium (DU) Policy**

*Mary Vaeth, MD, MS, COL (USA Retired)*

*Dori Rogut, APRN, BC*

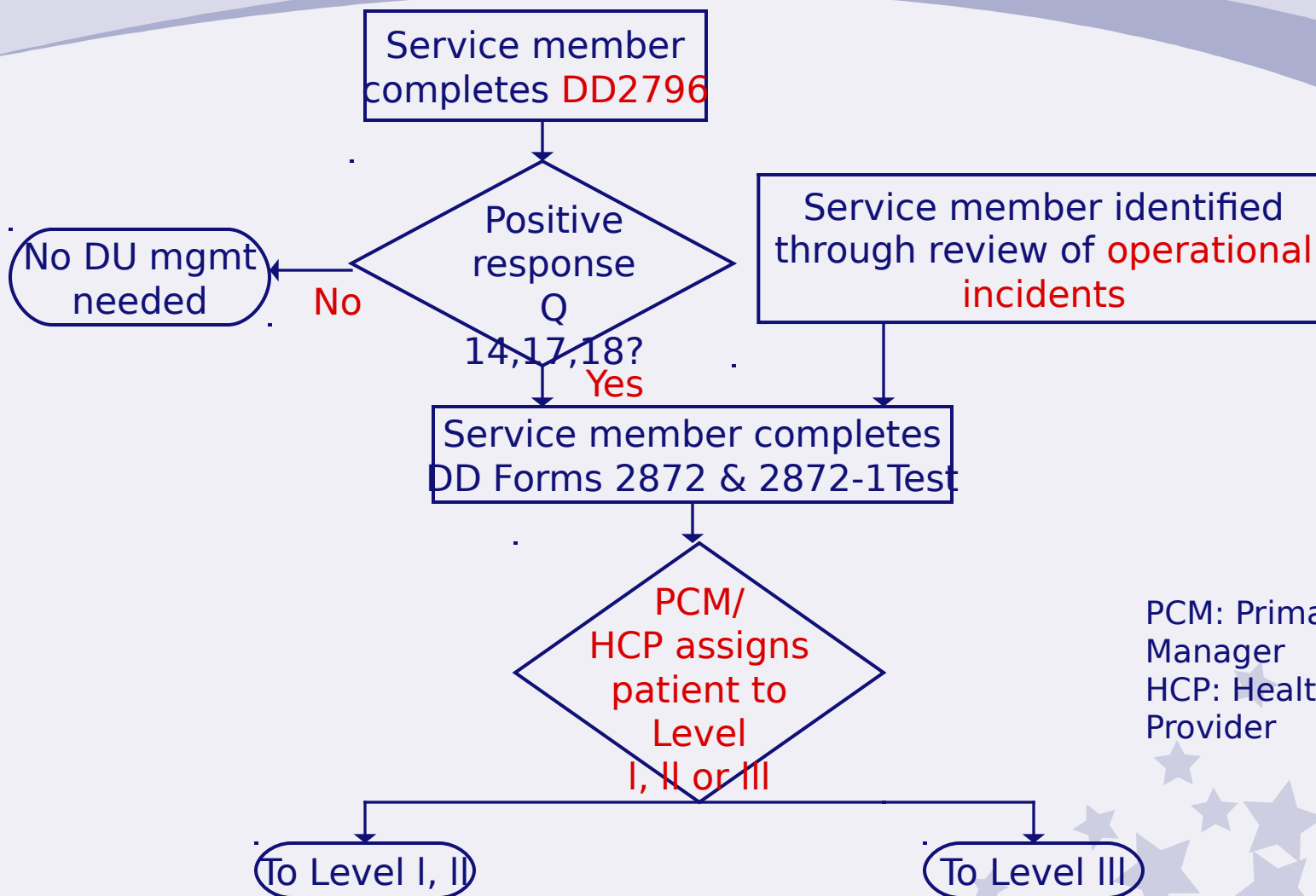
*Deployment Health Clinical Center*

# Service-Specific Depleted Uranium (DU) Policies



- ♠ Army - OTSG/MEDCOM Policy Memo 03-007, Medical Management of Army Personnel Exposed to Depleted Uranium (DU), 13 Jan 04
- ♠ Air Force - SG Policy Letter #03-003, Air Force Medical Service Policy on Operation IRAQI FREEDOM Depleted Uranium (DU) Medical Management, 14 Aug 03
- ♠ Navy/Marines - BUMED Instruction 6470.10B, Initial Management of Irradiated or Radioactively Contaminated Personnel, 26 Sep 03

# Algorithm for Identifying Potential DU Exposures



PCM: Primary Care Manager  
HCP: Health Care Provider

# Depleted Uranium (DU) Questionnaire DD Form 2872 Test



- ♠ Modification of VA Form 10-9009D
- ♠ 3 Parts
  - Demographic data
  - History and classification of DU exposure
  - Urine uranium results
- ♠ Will be converted to SF 600 Overprint in the future

DEPLETED URANIUM (DU) QUESTIONNAIRE											
1. MILITARY TREATMENT FACILITY (MTF): _____										MTF UIC: _____	
INSTALLATION NAME: _____											
PRIVACY ACT STATEMENT											
AUTHORITY: Sections 1074f, 3013, 6013, 8013, Title 10, U.S. Code; and E.O. 9397.											
PRINCIPAL PURPOSE(S): To assess your state of health after deployment or for any deployment related concern and to assist military health care providers in identifying and providing present and future medical care to you.											
ROUTINE USE(S): To other Federal and State agencies and civilian health care providers as necessary, in order to provide necessary medical care and treatment.											
DISCLOSURE: Voluntary; however, if information is not provided, health care WILL be furnished, but comprehensive care may not be possible.											
PART I											
2. LAST NAME _____											
3. FIRST NAME _____						MIDDLE NAME _____			TYPE _____		
4.a. SOCIAL SECURITY NUMBER _____				b. SERVICE SERIAL NUMBER _____				c. DATE OF BIRTH _____ Month Day Year			
5. ADDRESS (Street name and apartment number, if applicable) _____											
b. CITY OR TOWN _____											
c. COUNTY _____				d. STATE _____		e. ZIP CODE _____		PLUS 4 (Optional) _____		f. COUNTRY STATE _____	
g. TELEPHONE NUMBERS WHERE MEMBER MAY BE CONTACTED Daytime _____ Evening _____								TODAY'S DATE Month Day Year			
8.a. MARITAL STATUS 1 - Married 2 - Divorced 3 - Separated 4 - Widowed 5 - Single, Never Married											
b. SEX F - Female M - Male											
c. CURRENT STATUS 1 - Inpatient 2 - Outpatient 3 - Incarcerated 4 - Active Duty, Inpatient 5 - Active Duty, Outpatient											
d. BRANCH OF SERVICE 1 - Army 2 - Air Force 3 - Navy 4 - Marines 5 - Coast Guard 6 - Other											
7.a. LAST PERIOD OF SERVICE IN PERSIAN GULF AREA PRIOR TO OPERATION IRAQI FREEDOM (August 2, 1990 - March 18, 2003) FROM Day Month Year TO Day Month Year											
b. LAST PERIOD OF SERVICE IN PERSIAN GULF AREA DURING OPERATION IRAQI FREEDOM (March 18, 2003 - Present) FROM Day Month Year TO Day Month Year											
8. LAST PERIOD OF SERVICE IN AREAS OTHER THAN PERSIAN GULF WHEN EXPOSURE TO DU MAY HAVE OCCURRED FROM Day Month Year TO Day Month Year											
DD FORM 2872 TEST, FEB 2004										Page 1 of 7 Pages	
										Reset	

# Health Survey

## DD Form 2872-1 Test



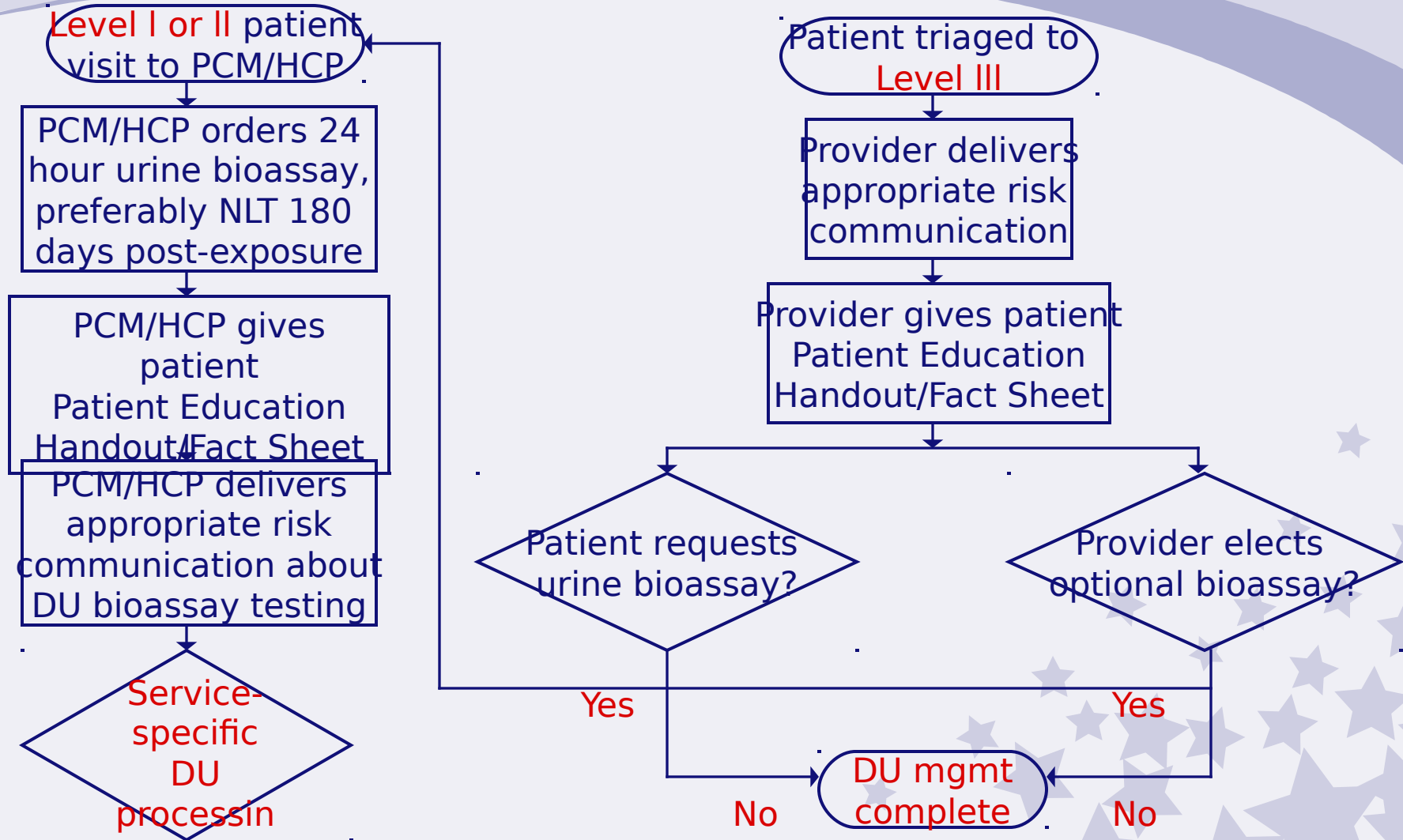
- ♠ Short, generic measure of health-related functioning
- ♠ Comprised of 36 questions asking the patient to describe physical or emotional problems over the past four weeks
- ♠ Contents identical to Short Form (SF) 36
- ♠ Will be included on SF 600 Overprint with DD Form 2872 Test in the future

HEALTH SURVEY (Supersedes Short Form (SF) - 36)					
PRIVACY ACT STATEMENT					
<small>AUTHORITY: Sections 1074f, 3013, 6013, 8013, Title 10, U.S. Code; and E.O. 9397.            PRINCIPAL PURPOSE(S): To assess your state of health after deployment or for any deployment related concern and to assist military health care providers in identifying and providing present and future medical care to you.            ROUTINE USE(S): To other Federal and State agencies and civilian health care providers as necessary, in order to provide necessary medical care and treatment.            DISCLOSURE: Voluntary; however, if information is not provided, health care WILL be furnished, but comprehensive care may not be possible.</small>					
NAME (Last, Middle, First)		SSN	DATE		
This survey asks for your views about your health. This information will help you keep track of how you feel and how well you are able to do your usual activities. Answer every question by selecting the answer as indicated. If you are unsure about how to answer a question, please give the best answer you can.					
1. In general, would you say your health is: (Fill in the circle that best describes your answer.)					
Excellent <input type="radio"/>	Very Good <input type="radio"/>	Good <input type="radio"/>	Fair <input type="radio"/>	Poor <input type="radio"/>	
2. Compared to one year ago, how would you rate your health in general now?					
Much better now than one year ago <input type="radio"/>	Somewhat better now than one year ago <input type="radio"/>	About the same as one year ago <input type="radio"/>	Somewhat worse now than one year ago <input type="radio"/>	Much worse now than one year ago <input type="radio"/>	
3. The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much? (Select one circle on each line.)					
			Yes, limited a lot <input type="radio"/>	Yes, limited a little <input type="radio"/>	No, not limited at all <input type="radio"/>
a. Vigorous Activities, such as running, lifting heavy objects, participating in strenuous sports			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Moderate Activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Lifting or carrying groceries			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Climbing several flights of stairs			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Climbing one flight of stairs			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Bending, kneeling, or stooping			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Walking more than a mile			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Walking several hundred yards			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Walking one hundred yards			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Bathing or dressing yourself			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?					
	All of the time <input type="radio"/>	Most of the time <input type="radio"/>	Some of the time <input type="radio"/>	A little of the time <input type="radio"/>	None of the time <input type="radio"/>
a. Cut down on the amount of time you spent on work or other activities					
b. Accomplished less than you would like					
c. Were limited in the kind of work or other activities					
d. Had difficulty performing the work or other activities (for example, it took extra effort)					

DD FORM 2872-1 TEST, FEB 2004

Reset

# Process for Ordering DU Bioassay



# Laboratory Testing



## 24-Hour Urine Samples Sent to Service- Designated Lab

- ♠ Army – USACHPPM Lab
- ♠ Air Force – AFIOH Lab
- ♠ Navy/Marines – VA Lab

## Urine Creatinine Analysis Performed at Service- Specified Lab

- ♠ Army – Local MTF Lab  
(Results sent to USACHPPM with  
urine specimen)
- ♠ Air Force – Local MTF Lab  
(Results sent to AFIOH with  
urine  
specimen)
- ♠ Navy/Marines – VA Lab

**USACHPPM** – US Army Center for Health Promotion and Preventive Medicine

**AFIOH** – Air Force Institute for Operational Health

**VA** – Baltimore Veterans Affairs Medical Center



# Testing Embedded Fragments



- ♠ HA Policy 04-004 states:

- “Forward any embedded fragments removed from injured personnel to an appropriate laboratory for analysis of the metal composition.”

- ♠ Testing is useful for verifying the source of DU exposure and identifying other types of fragments that may pose potential health risks or require medical follow-up

# Laboratory Analysis for Uranium and Depleted Uranium



## Army

**USACHPPM**  
(Uranium level and isotopic analysis when uranium level is  $\geq 268$ ng/L)

**AFIP**  
(Isotopic analysis when uranium level is  $<268$ ng/L)

## Air Force

**AFIOH**  
↓  
**VA**  
↓  
**AFIP**  
(Uranium level and isotopic analysis)  
↓  
**AFIOH**  
(Isotopic analysis)

## Navy/Marines

**VA**  
↓  
**AFIP**  
(Uranium level and isotopic analysis)

# DU Bioassay Results



- ♠ Bioassay results and interpretation prepared by
  - Army – USACHPPM
  - Air Force – AFIOH
  - Navy/Marines – Baltimore VA

# DU Bioassay Results (cont.)



- ♠ Results distributed to
  - Ordering provider/lab
    - Notifies patient of results
    - Ensures results are filed in patients' medical record
  - Navy/Marine patients receive letter with results from VA
  - Service-specific dosimetry center
  - Deployment Health Clinical Center for central archiving

# Service Semi-Annual Report Summary



## OIF DU Bioassay Results (as of 31 Mar 04)

Exposure Category	Army	Navy/ Marine s	Air Force	TOTAL	Elevated Total Uranium	Detect-able DU	Retained Fragment s
Level I	107	32	1	140	4	5	5 (DU)
Level II	107	195	3	305	8	0	0
Level III	52	0	2	54	0	0	5 (non DU)
Uncat	267	0	0	267	2	0	0
<b>Total</b>	<b>533</b>	<b>227</b>	<b>6</b>	<b>766</b>	<b>14</b>	<b>5</b>	<b>5/5</b>

# Referral to Baltimore VA DU Follow-Up Program



- ♠ All service members with embedded DU fragments and others with positive urine DU bioassay results will be offered referral to the VA DU Follow-up Program
- ♠ In accordance with ASD Memorandum 9 April 2004, all referrals must be coordinated through the Deployment Health Clinical Center (DHCC)
- ♠ Primary care manager or health care provider will contact the DHCC to make arrangements with the VA for the referral
- ♠ Referrals submitted on SF 513, Consultation Sheet

# DHCC's Role in Implementing ASD(HA) DU Policy



- ♠ Central archive for all DoD patient information related to DU exposure, testing, and follow-up for active duty and reserve personnel
- ♠ Coordination of referral to VA of DU positive patients
- ♠ Clinical guidance for implementing DoD DU Policy
  - Clinical consultation
  - Tools and resource material

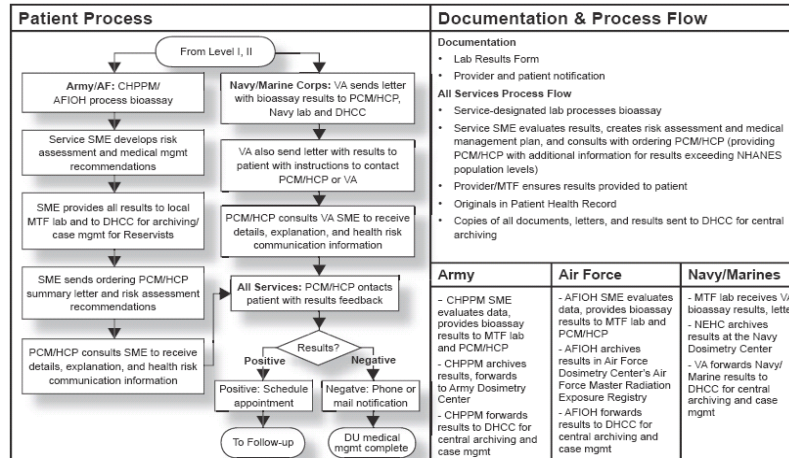
# PDH-CPG Toolbox Reference Cards on Depleted Uranium

## Depleted Uranium

### Depleted Uranium Exposure Medical Management Process Flow DoD Process Summary

1. **Identification:** Positive responses on DD Form 2796, Questions 14, 17, or 18; or identification with known exposure event or unit. Annotate DD 2796; send to AMSA

### Depleted Uranium Exposure Medical Management Process Flow Lab Results



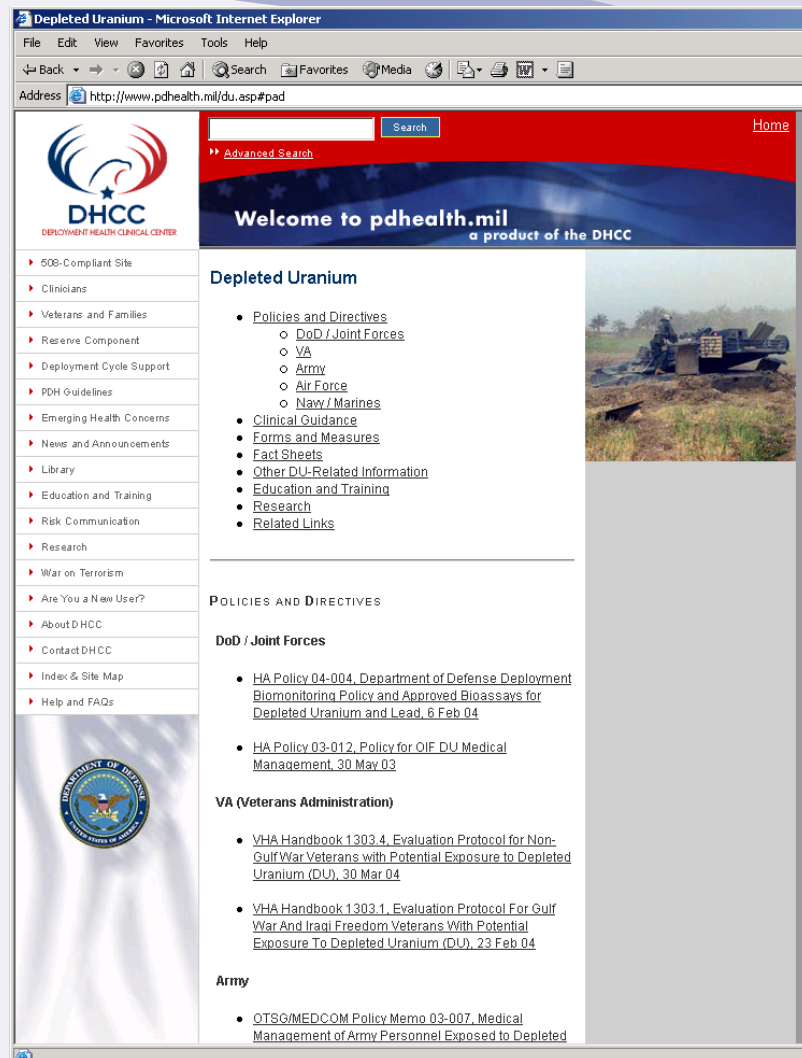


# DHCC Depleted Uranium Page

***www.PDHealth.mil***



- ♠ Policies and Directives
- ♠ Clinical Guidance
- ♠ Forms and Measures
- ♠ Fact Sheets
- ♠ Other DU-Related Information
- ♠ Education and Training
- ♠ Research
- ♠ Related Links



# Depleted Uranium Presentation

***www.PDHealth.mil***




♠ Video

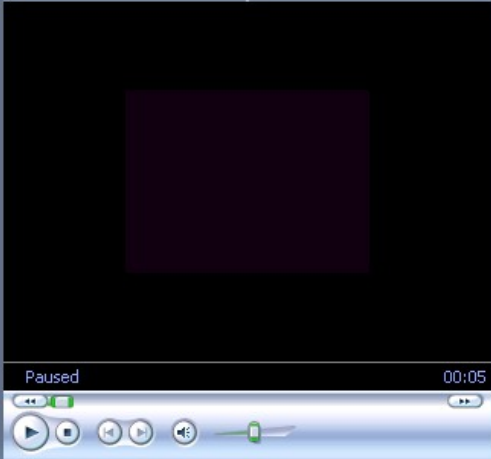
♠ Script

♠ Slides


DHCC - Microsoft Internet Explorer

**Deployment Health Clinical Training Series**  
January 27-29, 2004

Provider Helpline:  
1-866-559-1627  
[www.PDHealth.mil](http://www.PDHealth.mil)



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**Operation Iraqi Freedom (OIF)  
Management of Depleted Uranium  
Exposures**  
*R. Craig Postlewaite, DVM, MPH  
Senior Analyst, Force Health Protection, DoD FHP&R  
Deployment Health Support Directorate*

Hello, I am Dr Craig Postlewaite, Senior Environmental Health Analyst for the Department of Defense Deployment Health Support Directorate. I am here to speak with you about the assessment and medical management of depleted uranium exposures acquired during Operation Iraqi Freedom and in support of the Post-Deployment Clinical Practice Guideline. I will cover the following topics during this presentation:

- [2 - Objectives](#)
- [3 - Background](#)
- [4 - Military Uses of DU](#)
- [5 - DU External Exposures](#)